

ACHIEVEMENT CHART: SCIENCE, GRADES 9–12

| Categories | 50–59% (Level 1) | 60–69% (Level 2) | 70–79% (Level 3) | 80–100% (Level 4) |
|--|--|---|---|---|
| Knowledge and Understanding – Subject-specific content acquired in each course (knowledge), and the comprehension of its meaning and significance (understanding) | | | | |
| | The student: | | | |
| Knowledge of content (e.g., facts, terminology, definitions, safe use of equipment and materials) | demonstrates limited knowledge of content | demonstrates some knowledge of content | demonstrates considerable knowledge of content | demonstrates thorough knowledge of content |
| Understanding of content (e.g., concepts, ideas, theories, principles, procedures, processes) | demonstrates limited understanding of content | demonstrates some understanding of content | demonstrates considerable understanding of content | demonstrates thorough understanding of content |
| Thinking and Investigation – The use of critical and creative thinking skills and inquiry, research, and problem-solving skills and/or processes | | | | |
| | The student: | | | |
| Use of initiating and planning skills and strategies (e.g., formulating questions, identifying the problem, developing hypotheses, selecting strategies and resources, developing plans) | uses initiating and planning skills and strategies with limited effectiveness | uses initiating and planning skills and strategies with some effectiveness | uses initiating and planning skills and strategies with considerable effectiveness | uses initiating and planning skills and strategies with a high degree of effectiveness |
| Use of processing skills and strategies (e.g., performing and recording, gathering evidence and data, observing, manipulating materials and using equipment safely, solving equations, proving) | uses processing skills and strategies with limited effectiveness | uses processing skills and strategies with some effectiveness | uses processing skills and strategies with considerable effectiveness | uses processing skills and strategies with a high degree of effectiveness |
| Use of critical/creative thinking processes, skills, and strategies (e.g., analysing, interpreting, problem solving, evaluating, forming and justifying conclusions on the basis of evidence) | uses critical/creative thinking processes, skills, and strategies with limited effectiveness | uses critical/creative thinking processes, skills, and strategies with some effectiveness | uses critical/creative thinking processes, skills, and strategies with considerable effectiveness | uses critical/creative thinking processes, skills, and strategies with a high degree of effectiveness |
| Communication – The conveying of meaning through various forms | | | | |
| | The student: | | | |
| Expression and organization of ideas and information (e.g., clear expression, logical organization) in oral, visual, and/or written forms (e.g., diagrams, models) | expresses and organizes ideas and information with limited effectiveness | expresses and organizes ideas and information with some effectiveness | expresses and organizes ideas and information with considerable effectiveness | expresses and organizes ideas and information with a high degree of effectiveness |

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|--|--|---|---|---|
| Communication <i>(continued)</i> | | | | |
| | The student: | | | |
| Communication for different audiences (e.g., peers, adults) and purposes (e.g., to inform, to persuade) in oral, visual, and/or written forms | communicates for different audiences and purposes with limited effectiveness | communicates for different audiences and purposes with some effectiveness | communicates for different audiences and purposes with considerable effectiveness | communicates for different audiences and purposes with a high degree of effectiveness |
| Use of conventions, vocabulary, and terminology of the discipline in oral, visual, and/or written forms (e.g., symbols, formulae, scientific notation, SI units) | uses conventions, vocabulary, and terminology of the discipline with limited effectiveness | uses conventions, vocabulary, and terminology of the discipline with some effectiveness | uses conventions, vocabulary, and terminology of the discipline with considerable effectiveness | uses conventions, vocabulary, and terminology of the discipline with a high degree of effectiveness |
| Application – The use of knowledge and skills to make connections within and between various contexts | | | | |
| | The student: | | | |
| Application of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) in familiar contexts | applies knowledge and skills in familiar contexts with limited effectiveness | applies knowledge and skills in familiar contexts with some effectiveness | applies knowledge and skills in familiar contexts with considerable effectiveness | applies knowledge and skills in familiar contexts with a high degree of effectiveness |
| Transfer of knowledge and skills (e.g., concepts and processes, safe use of equipment, scientific investigation skills) to unfamiliar contexts | transfers knowledge and skills to unfamiliar contexts with limited effectiveness | transfers knowledge and skills to unfamiliar contexts with some effectiveness | transfers knowledge and skills to unfamiliar contexts with considerable effectiveness | transfers knowledge and skills to unfamiliar contexts with a high degree of effectiveness |
| Making connections between science, technology, society, and the environment (e.g., assessing the impact of science on technology, people and other living things, and the environment) | makes connections between science, technology, society, and the environment with limited effectiveness | makes connections between science, technology, society, and the environment with some effectiveness | makes connections between science, technology, society, and the environment with considerable effectiveness | makes connections between science, technology, society, and the environment with a high degree of effectiveness |
| Proposing courses of practical action to deal with problems relating to science, technology, society, and the environment | proposes courses of practical action of limited effectiveness | proposes courses of practical action of some effectiveness | proposes courses of practical action of considerable effectiveness | proposes highly effective courses of practical action |

Note: A student whose achievement is below 50% at the end of a course will not obtain a credit for the course.